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(71) Applicant (for all designated States except US): PCBU
SERVICES, INC. [US/US]; 300 Delaware Avenue, Suite
1269, Wilmington, DE 19801 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BOGGS, Janet
[US/US]; 6925 N. 900 East, Brownsburg, IN 46112 (US).
BRANDSTADTER, Stephan, M. [US/US]; 3946 N.
Washington Boulevard, Indianapolis, IN 47906 (US).
CHIEN, John [US/US]; 3318 Humbolt Street, West
Lafayette, IN 47906 (US). SHARMA, Vimal [IN/US];

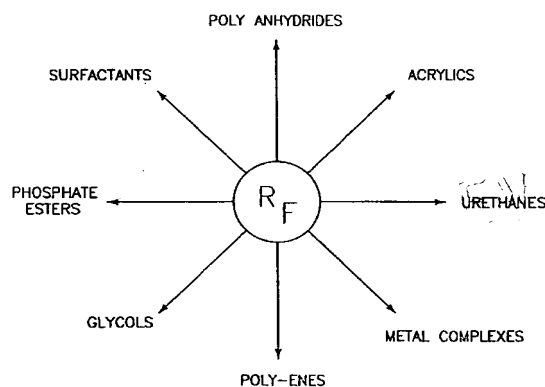
2101 Cumberland Avenue, #5104, West Lafayette, IN
47906 (US). EDWARDS, E., Bradley [US/US]; 3704
Woodcliff Drive, Lafayette, IN 47906 (US). HEDRICK,
Victoria, E. [US/US]; 9262 South 300 East, Brookston, IN
47923 (US). JACKSON, Andrew [US/US]; 3346 Whirl
Away Court, West Lafayette, IN 47906 (US). LEMAN,
Gregory [US/US]; 3319 Crawford Street, West Lafayette,
IN 47906 (US). AMEDURI, Bruno [FR/FR]; 26, Rue
Louis Roumieux, F-34090 Montpellier (FR). KOSTOV,
George, K. [BG/FR]; App. 103, Res Le Mas Vaneau, 189,
Rue Edmond Lautard, F-34080 Montpellier (FR).

(74) Agents: HYTA, Robert, C. et al.; Wells St. John P.S., 601
West First Avenue, Suite 1300, Spokane, WA 99201-3828
(US).

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(54) Title: PRODUCTION PROCESSES AND SYSTEMS, COMPOSITIONS, SURFACTANTS, MONOMER UNITS, METAL COMPLEXES, PHOSPHATE ESTERS, GLYCOLS, AQUEOUS FILM FORMING FOAMS, AND FOAM STABILIZERS



(57) Abstract: Production processes and systems are provided that include reacting halogenated compounds, dehalogenating compounds, reacting alcohols, reacting olefins and a saturated compounds, reacting reactants having at least two -CF₃ groups with reactants having cyclic groups. R_F-compositions such as R_F-intermediates, R_F-surfactants, R_F-monomers, R_F-monomer units, R_F-metal complexes, R_F-phosphate esters, R_F-glycols, R_F-urethanes, and/or R_F-foam stabilizers. The R_F portion can include at least two -CF₃ groups, at least three -CF₃ groups, and/or at least two -CF₃ groups and at least two -CH₂- groups. Detergents, emulsifiers, paints, adhesives, inks, wetting agents, foamers, and defoamers including the R_F-surfactant composition are provided. Acrylics, resins, and polymers are provided that include a R_F-monomer unit. Compositions are provided that include a substrate having a R_F-composition thereover. Aqueous Film Forming Foam ("AFFF") formulations are provided that can include R_F-surfactants and/or R_F-foam stabilizers are provided.



WO 2005/074593 A2



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